

Town of Banff Zero Waste Action Plan

Updated 2023-2028



The Town of Banff's roadmap outlining priority actions & funding needs to reach the Town's waste diversion goal of 70% by 2028 and ultimately send zero waste to landfill.

I. Strategic Framework: Zero Waste & The Circular Economy

Vision Statement

As a municipality located in Canada's first National Park and UNESCO world heritage site, Banff strives to be a model environmental community where everything we do is guided by a goal to preserve this special place. Reducing and diverting waste to landfill is critical to maintaining the well-being and sustainability of our community.

Zero Waste, the Circular Economy & Climate Action

While significant progress has been made, our community still generates waste at a rate that is not in alignment with sustainable ecological limitations or national park values. This presents many negative implications with respect to climate change, local ecosystems and wildlife, and overall long-term well-being of the park. There are significant greenhouse gas emissions associated with waste which those generated in the landfill, embodied production and consumption-based emissions, transportation emissions, and other hidden emissions associated with resource extraction. On a global scale, these emissions are significant. All too often in our current paradigm, raw materials and resources are extracted to create products that are used very briefly, only to be discarded as waste. As such, source reduction to eliminate waste along with thoughtful waste diversion solutions remains a critical component of Banff's broader climate action efforts.

While the idea of moving toward zero waste may seem aspirational and may never be perfect, it provides an important vision and common framework for a community to work together on. Most communities around the globe acknowledge the waste hierarchy (Figure 1) which prioritises actions that prevent waste from happening in the first place. Through the waste hierarchy framework, rethinking the systems that create waste in the first place is the priority.

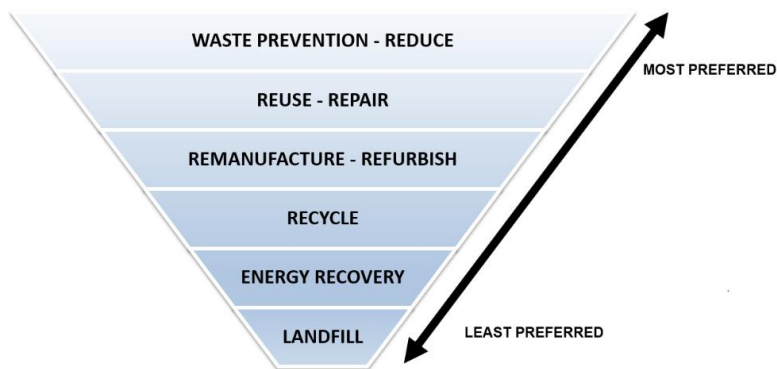


Figure 1: Government of Canada Waste Hierarchy¹

Banff's approach to zero waste acknowledges the importance of transitioning from a linear to a circular economy, which is a systems solution framework that tackles global challenges like climate change, biodiversity loss, waste, and pollution. It is based on three principles, driven by design: eliminate waste and pollution, circulate products and materials (at their highest value), and regenerate nature.

¹ Government of Canada: <https://www.canada.ca/en/environment-climate-change/services/managing-reducing-waste/municipal-solid/reducing.html>

Linear Economy: in our current economy, we take materials from the Earth, make products from them, and eventually throw them away as waste – the process is linear.

Circular Economy: in a circular economy we stop waste being produced in the first place. The circular economy is based on three principles, driven by design:

- Eliminate waste and pollution
- Circulate products and materials (at their highest value)
- Regenerate nature

As such, circular economy (CE) actions are not only embedded but prioritized throughout the Zero Waste Action plan, acknowledging the environmental, economic, and social advantages of preventing waste in the first place in addition to waste diversion strategies. Banff Public Library’s “Library of Things” is a tangible example of a circular economy success story for Banff.

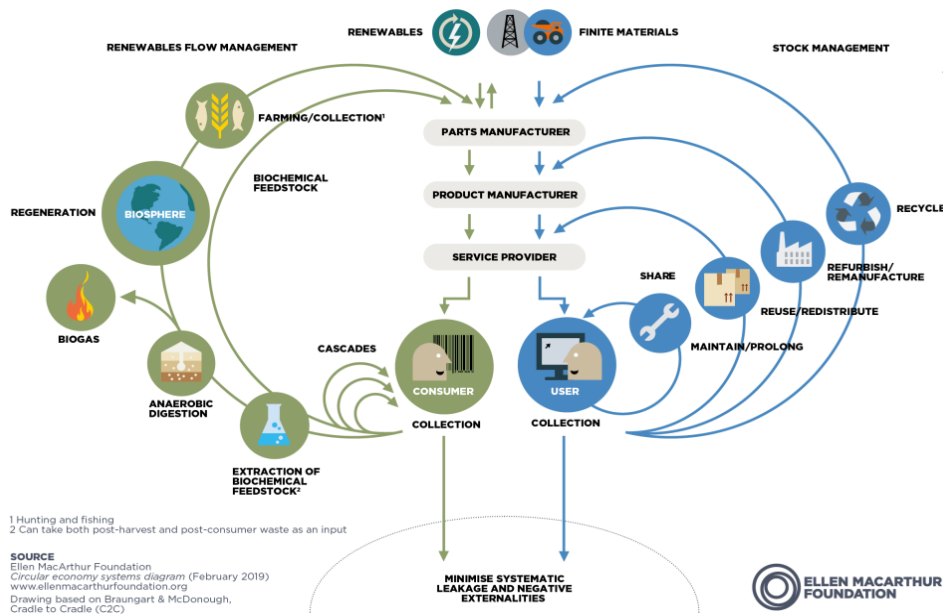


Figure 2: Ellen Macarthur Circular Economy Diagram;²

Waste-Related Emissions

One of the reasons to reduce the amount of waste we produce is the emissions associated with collecting, transporting, and landfilling. While the emissions from using diesel fuel for trucks collecting the various waste streams throughout town and transporting them to landfills are fairly obvious, the impacts of organic material decomposing in a landfill are often overlooked. The methane produced during this anaerobic decomposition is a powerful greenhouse gas that’s released into the atmosphere. Priority actions, along with indicators for waste-related emissions, are outlined in this report.

² Ellen Macarthur Foundation: <https://ellenmacarthurfoundation.org/circular-economy-diagram>

2. Introduction & Waste Diversion Program Update

In 2018, Banff Council adopted targets to divert 70% of waste by 2028 and send zero waste to landfill by 2050. In 2019, Council approved and allocated budget for a set of 10 waste diversion tactics to help achieve the targets. Waste diversion tactics adopted in 2019 focus on three broad areas including:

- ✓ Increasing convenience
- ✓ Regulatory changes
- ✓ Public communications

The Zero Waste Action Plan is a strategic update that builds on Waste Diversion Targets & Tactics, along with Banff's Environmental Master Plan framework, as adopted in 2019. The updated action plan includes emergent focus areas, data insights, and pandemic impacts. It also acknowledges the importance of adopting a circular economy lens to effectively address the root cause of our waste problem and its connection to climate change.

An overview of all waste diversion tactics as approved in 2019, including status updates, is provided below. The Town continues to balance the need for all three different types of tactic areas strategically by monitoring data trends, stakeholder feedback, and other qualitative indicators of progress, stagnancy, or failure. While the Zero Waste Trail campaign and several other tactics launched in 2019, it is important to acknowledge that the launch was shortly followed by the covid-19 pandemic. The pandemic had unique implications for Banff's waste streams and with respect to allocation of municipal resources.

Table 1. Status of Waste Diversion Tactics as Approved in 2019

Waste Diversion Tactic	Objective	Outcome
E1 Education & Communications	Launch and carry out a public education and communications campaign	<ul style="list-style-type: none"> ❖ Zero Waste Trail campaign designed, launched, and implemented; updated set of communications resources created for both sectors in 2019
C1 Support Banff Food Rescue	Support Banff Food Rescue to divert more edible food	<ul style="list-style-type: none"> ❖ Banff Food Rescue has operated out of Sundance Mall since 2019; continually adapting, especially through pandemic, to meet community need ❖ Over 300% increase in edible food diverted compared with baseline
C2 Require non-residential sector to provide infrastructure for diversion of food	Provide a convenient option for all non-residential sector entities to divert food	<ul style="list-style-type: none"> ❖ Bylaw implemented in 2021, most buildings compliant ❖ 26% increase in diverted material observed in conjunction with this action compared with baseline
C3 Allow the non-residential sector to place yard & garden materials in their food bins	Provide an additional free and convenient option for non-residential sector entities to divert yard & garden materials	<ul style="list-style-type: none"> ❖ Re-considering most effective tactics to increase diversion in this material stream; did not appear as an issue in waste characterization data
C4 Downtown District Recycling Depots	Provide a free, convenient recycling option for businesses in the Downtown District	<ul style="list-style-type: none"> ❖ Depots installed in 2019 ❖ No measurable diversion increase observed in conjunction with this action; however, may skewed by increase in uptake of private haulers/pandemic impacts
C5 Non-Residential Bylaw Amendment	Provide additional free and convenient recycling option for businesses throughout the town	<ul style="list-style-type: none"> ❖ Rates were adjusted at the Waste Transfer Site to make paper and mixed container recycling free for businesses; waste bylaws were amended to permit businesses to use residential recycling bins around town in 2019. ❖ No measurable diversion increase observed in conjunction with this action; however, may skewed by increase in uptake of private haulers/pandemic impacts

C6 Residential Food Bins	Increase convenience of composting food scraps for residential sector	<ul style="list-style-type: none"> ❖ Total of 43 food bins have been added since 2019 ❖ 200% increase in diverted material observed in conjunction with this action compared with baseline
C8 Residential Recycling Bins	Increase convenience of recycling in the residential sector	<ul style="list-style-type: none"> ❖ Total of 21 recycling bins have been added since 2019 ❖ No measurable diversion increase observed in conjunction with this action; however, may be skewed by increase in uptake of private haulers/pandemic impacts
F1 Adjust Yard & Garden Rates	Create a financial incentive to increase diversion of yard & garden materials	<ul style="list-style-type: none"> ❖ Transfer site rates lowered in 2019 ❖ 19% increase in diverted material observed in conjunction with this action compared with baseline
B1 Material ban of food scraps and yard & garden waste for the non-residential sector	Implement a material ban on key materials to increase diversion, education and communications efforts and infrastructure requirement	<ul style="list-style-type: none"> ❖ Bylaw implemented in 2022 with good compliance; however, no enforcement in hotel sector currently ❖ 97% increase in diverted material observed in conjunction with this action

3. Data, Targets & Indicators

Baseline Data

In 2018, the Town of Banff Resource Recovery department began implementing changes to improve data tracking with respect to materials that Town of Banff handles. The creation of automated data management systems has provided critical information to strategically plan with a better understanding of waste trends, specifically with respect to priority material streams.

In the process of undergoing this data deep dive, significant discrepancies were found with respect to previously reported numbers. For example, at the time that waste diversion targets were adopted, the Town’s diversion rate was reported at 46% based on a 2016/2017 average. Through further data analysis and new tracking systems, it is estimated that the actual 2016/2017 average was below 35%. The discrepancy was largely a result of overreporting on organic waste tonnages at the N-Viro plant, which had previously been processing organic waste on-site. Going forward, a 2017-2018 average based on corrected data will be used as a baseline for which to measure progress.

Pandemic Impacts

It is important to note that the pandemic and decreased visitation levels had a major impact on Banff’s waste streams in 2020 and 2021. Waste sent to landfill in 2021 was at approximately 65% of 2019 levels, with the main decrease noted in the non-residential sector. With 2022 visitation levels on par with 2019, waste data trends are proving to be positive, as diverted materials increase and exceed pre-pandemic levels, with landfill numbers remaining significantly lower than pre-pandemic levels.

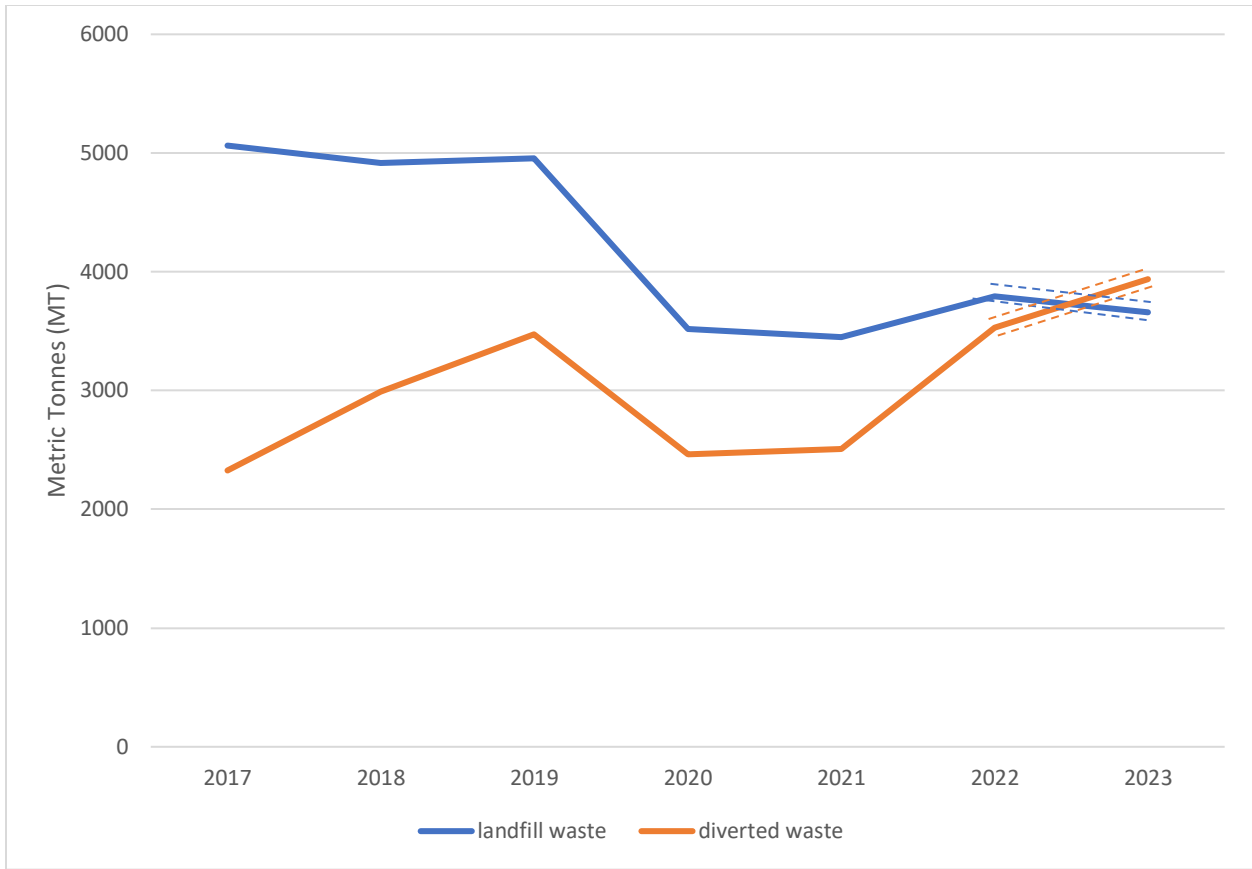


Figure 3: Comparison of landfilled & diverted materials in Metric Tonnes (MT) 2017-2023, using existing 2023 data plus estimates until end-of-year.

It is also worth noting that previous data assumptions showed a different split between the non-residential and residential waste than what is found in the corrected data, demonstrating that non-residential landfill tonnages have decreased relative to residential. This is likely a result of pandemic impacts and waste reduction efforts made by non-residential sector entities.

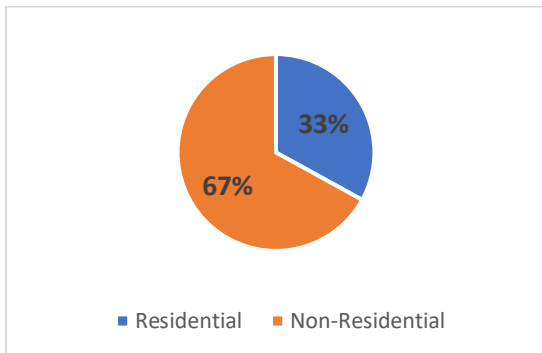


Figure 4: Landfill Waste Breakdown by Sector 2018

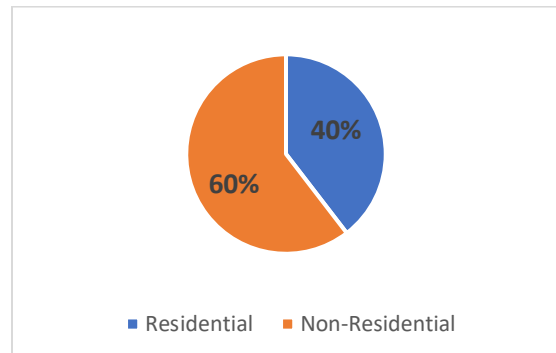


Figure 5: Landfill Waste Breakdown by Sector 2022

Waste Characterization

The Town of Banff contracted S-Cubed Environmental to conduct a waste characterization study in Summer & Fall of 2022 to better understand what materials in Banff's landfill stream could be diverted for recycling and composting or eliminated through source reduction. Results of the waste characterization study are broken down by sector in Figure 6.

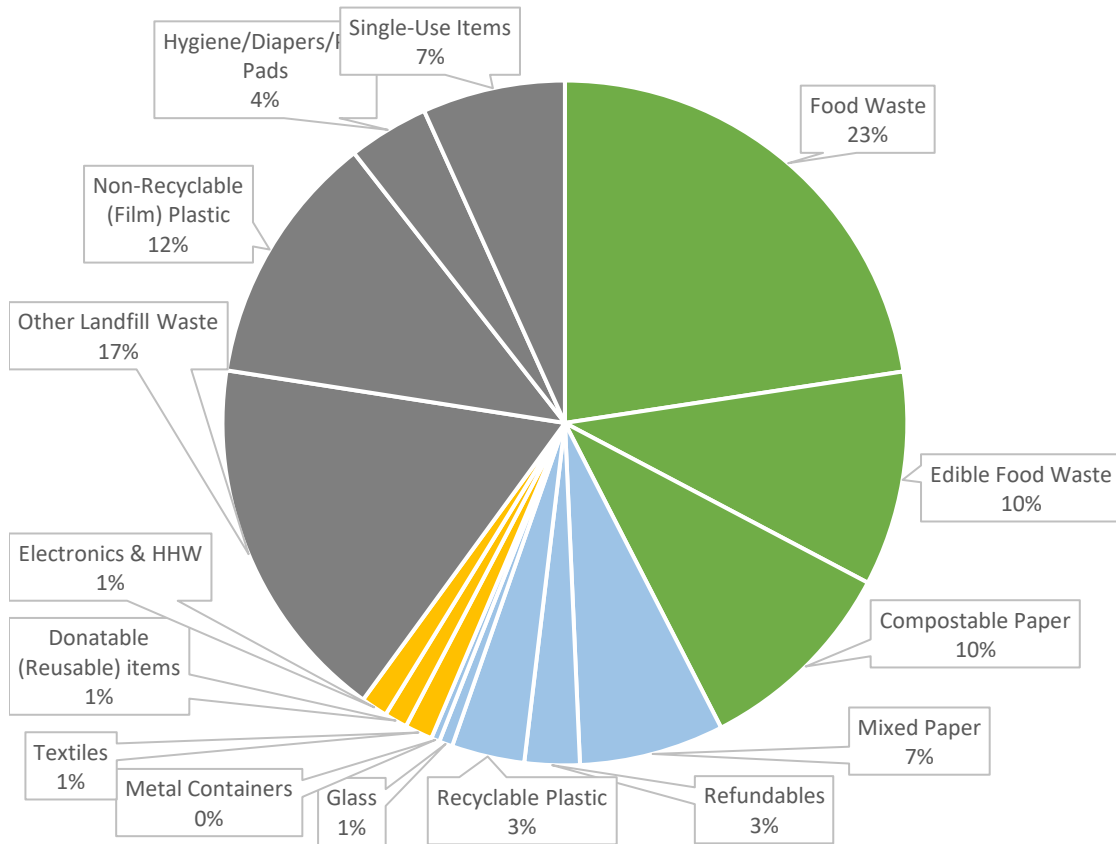


Figure 6: Non-Residential Waste Characterization Results by Weight (2022)

Reduction of organic material, primarily food waste and food-soiled paper, remains Banff's most significant diversion opportunity for the non-residential sector. In applying a climate mitigation lens to waste management, reduction of organic material from the landfill stream is the most significant action to reduce waste-related emissions. It is worth noting that in the Fall audit, the percentage of food waste found was significantly lower than in the summer audit. This can be directly attributed to the implementation of a landfill ban on food scraps & recycling for non-residential sector entities. As such, compostable paper items, like paper towel, are now likely to be equal contributors of organic waste in the landfill stream to food waste itself.

In previous waste characterizations, it was estimated that landfill waste, made up of materials for which there is currently no recycling stream, was around 20%. However, current waste characterization data shows that this number is closer to 35%; as such, actions that prioritize elimination of items in the landfill stream (ex. single-use items, film plastic) will be critical to achieve waste diversion targets.

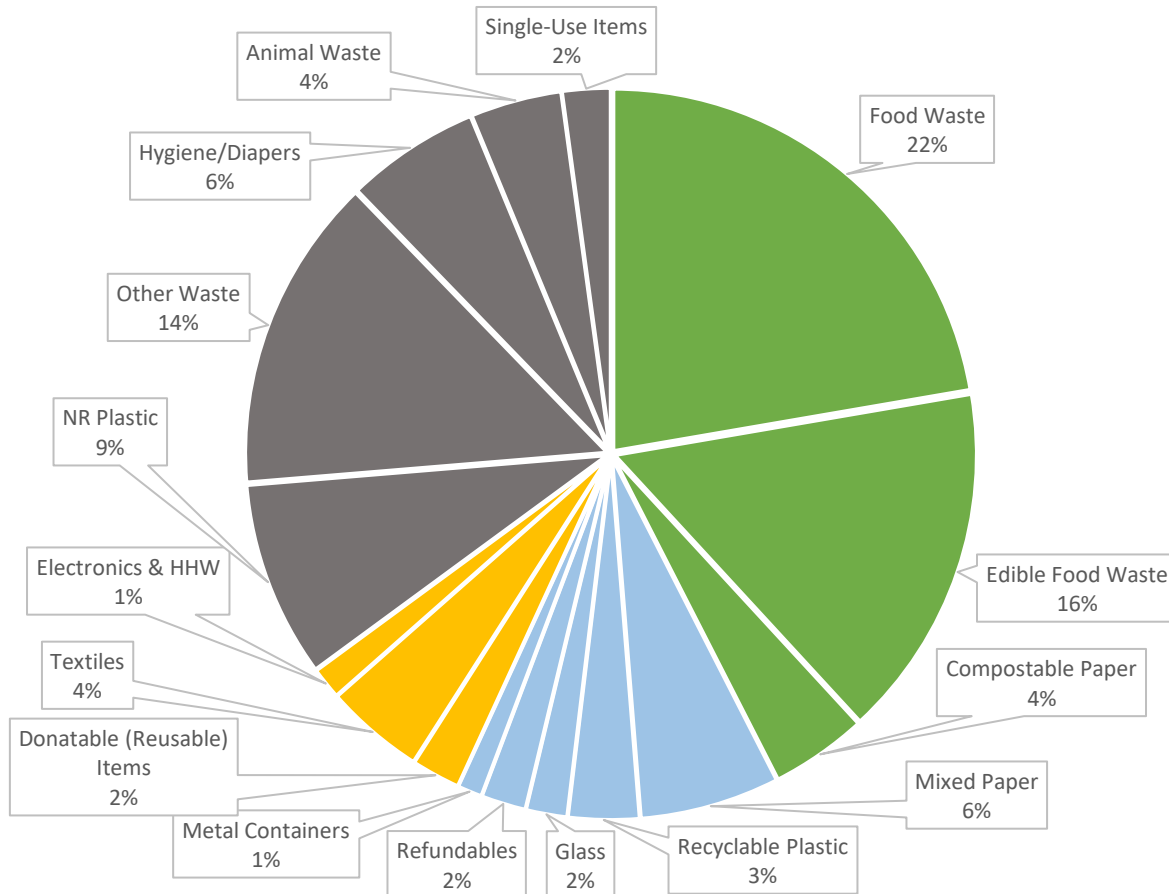


Figure 7. Residential Waste Characterization Results by Weight (2022)

Like in the non-residential sector, reduction of organic waste, primarily edible and non-edible food waste, remains Banff's most significant diversion opportunity for the non-residential sector. It is important to note that almost 50% of compostable material was identified as edible food waste, which could have been eaten and, as such, prevented from entering the landfill or food scraps stream in the first place. As such, initiatives that target edible food waste, particularly given Banff's seasonal resident population, are relevant. An example of this could be funding community fridges in staff accommodations.

Reducing the landfill stream, made up of materials for which there is no current recycling stream, will be important in the residential sector as well. However, it is important to note that such efforts will need to be targeted upstream by working with businesses and suppliers to foster source reduction of waste and continually advocate for producer responsibility models, as opposed to simply educating residents. For example, residents currently have minimal options to reduce their waste while grocery shopping, due to the proliferation of non-recyclable plastic packaging. In the absence of viable alternatives, it is difficult for even the most motivated of individuals to shop "zero waste" in their daily lives.

Key opportunities identified by the consultant who carried out the study were as follows:

Non-Residential Sector	Residential Sector	Single-Use Item Reduction
<ul style="list-style-type: none"> ❖ Continued Implementation of the Food Scraps & Recycling Bylaw ❖ Promote Increased Diversion of Compostable Paper ❖ Foster Increased Diversion of Compostable Materials in the Hotel Sector 	<ul style="list-style-type: none"> ❖ Continue Creation of Complete Zero Waste Stations ❖ Engage With Residents Directly to Understand and Address Main Barriers to Diversion ❖ Continue and Consider Expanding Public Communications Efforts, Education, and Signage 	<ul style="list-style-type: none"> ❖ Continue focusing on reduction of single-use items overall, rather than banning one material like plastic and replacing it with compostable/recyclable alternatives

Targets & Indicators

While significant work remains, steady progress is being made with respect to Banff’s community-wide waste diversion target of 70% by 2028, which currently sits at 52%. This represents an increase of 17% from the 2017-2018 average baseline of 35%. The numbers trail slightly behind a targeted increase of 20% by 2023, which can be attributed to the significant baseline differential along with program delays that resulted from conflicting priorities during the pandemic.

Banff’s landfill waste has dropped by over 25%, despite a return to normal visitation levels post-pandemic along with an increase in permanent population. While 70% diversion by 2028 remains an achievable goal; it will require significant efforts to improve residential sector waste diversion, ongoing engagement with the business sector, and innovative strategies to eliminate landfill waste sources where there is no current diversion stream.

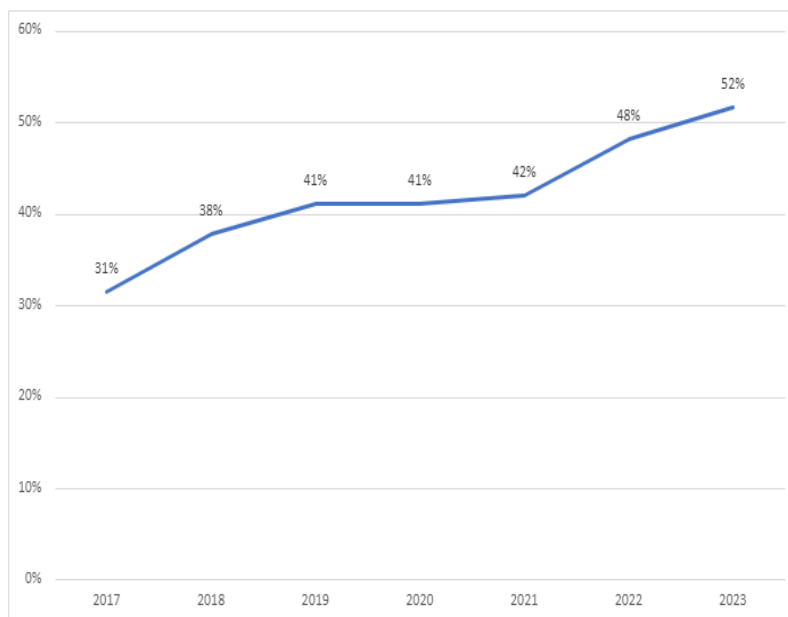


Figure 8: Community-Wide Diversion Rate 2017-2023
(includes non-residential, residential, drop-off yard, and data from private sources)

To improve transparency among Banff’s community, a public-facing dashboard was launched recently. Updated monthly, the dashboard shares key metrics and can be found online at BanffZeroWasteTrail.ca.

The following indicators have been established to measure progress on the Town of Banff’s vision to foster a circular economy for our community and achieve our target of 70% waste diversion by 2028. Council will receive an annual report that will use these indicators as a framework to understand if the Town is on track to achieve our targets (see appendix A.)

Table 2: Indicators of Progress on Zero Waste Initiatives

Circular Economy	Waste Diversion	Material Stream Specific	Waste-Related Emissions
<ul style="list-style-type: none"> ○ Materials reused at the Re-Use It Centre (MT) ○ Items borrowed at the Library of Things (#) ○ Library of Things users (#) ○ Businesses using reusable cups or containers for takeaway services (#) ○ Food rescued by Banff Food Rescue (MT) ○ Residents accessing Banff Food Rescue (#) ○ “Sundry” waste reduction (%) ○ CRD waste materials reused (MT) 	<ul style="list-style-type: none"> ○ Community-Wide Waste Diversion (%) ○ Non-Residential Sector Waste Diversion (%) ○ Residential Sector Waste Diversion (%) ○ CRD Sector Waste Diversion (%) 	<ul style="list-style-type: none"> ○ Landfill Waste Reduction (KG/capita) ○ Food Scraps & Food-Soiled Paper (MT) ○ Recycling (MT) ○ “Town Run” waste stream reduction; SUI (MT) 	<ul style="list-style-type: none"> ○ Landfill emissions (tCO₂e) ○ Emissions avoided by composting & recycling (tCO₂e) ○ Transportation emissions associated with waste hauling (tCO₂e) ○ Emissions associated with fuel consumption in-town (tCO₂e)

4. Opportunities & Challenges (What We Hear)

Since the launch of the Zero Waste Trail campaign in 2019, the Town has gathered feedback through several surveys, engagement with community members, businesses engagement, and internal teams (i.e., Resource Recovery frontline staff). This has informed our understanding of barriers, motivators, and issues associated with moving toward zero waste in Banff. Outlined below are **key** themes that continually arise and, as such, have been strong considerations in strategic planning of future initiatives.

Table 3: What We Hear: Challenges & Opportunities

Opportunities	Challenges
<ul style="list-style-type: none"> ❖ Sense of Place: there is a strong connection with sense of place and Banff National Park values, and a sense of responsibility to protect Banff for future generations ❖ Environmental Responsibility: there is a general acknowledgement and level of buy-in that environmental priorities are no longer a choice, but a must do ❖ Visibility of Waste: zero waste is a tangible area for people into take action on climate change ❖ Transparency: there is a desire for increased transparency around waste systems ❖ Community Accountability: Banff is a small community where the word spreads fast. Programs that reward positive behaviour (ex. Trailblazers) seem to be effective in shifting social norms 	<ul style="list-style-type: none"> ❖ Economic Drivers: while Banff National Park environmental values are important, there is often still a tension with economic drivers including real & perceived costs associated with environmental actions ❖ Population Turnover: seasonal turnover in the community results in a lack of continuity; continual education is needed, which is challenging to sustain ❖ Tourism Demands: there are conflicting priorities with meeting demands of visitors in the commercial sector, especially during busy times of the year ❖ Perception vs. Reality: many believe that the negative impact of businesses and high visitation levels cancels out the hard work of residents ❖ Anonymity: Banff’s residential waste system is inherently “anonymous” which makes accountability a challenge ❖ User Experience: Banff’s residential waste system is unique, and is not very convenient or easy to use

5. Zero Waste Action Plan

Priority focus areas and actions have been broken down by sector in the action plan. Actions are divided into three types of approaches, in alignment with original waste diversion tactics as adopted in 2018: increasing convenience, regulatory changes, and public communications. The below summary of actions also indicates correlation with layers of the waste hierarchy, including ‘Rethink, Reduce, Reuse, and Recycle’.


Seven focus areas have been identified to help the community achieve our goal of 70% waste diversion by 2028:

1. Residential Waste Diversion
2. Non-Residential Waste Diversion
3. Single-Use Items & Packaging Reduction
4. Reducing Consumption
5. Pedestrian Bin Waste Streams
6. Construction, Renovation & Demolition Materials
7. Material Management & Emissions

Under each priority focus area, key actions are listed, including estimated budget needs.

I. Residential Waste Diversion

Residential Waste Snapshot	
Annual Landfill Waste (MT)	1335*
Percentage % of Total Landfill	35%*
Baseline Diversion	24%
Current Diversion	31%



*2022

Reduction & diversion of residential waste remains one of the biggest challenges for Banff’s community to move toward zero waste and, as such, is the first priority action area. While composting food scraps & food-soiled paper has quadrupled since the baseline year, overall food scraps tonnages remain very low relative to the landfill stream.

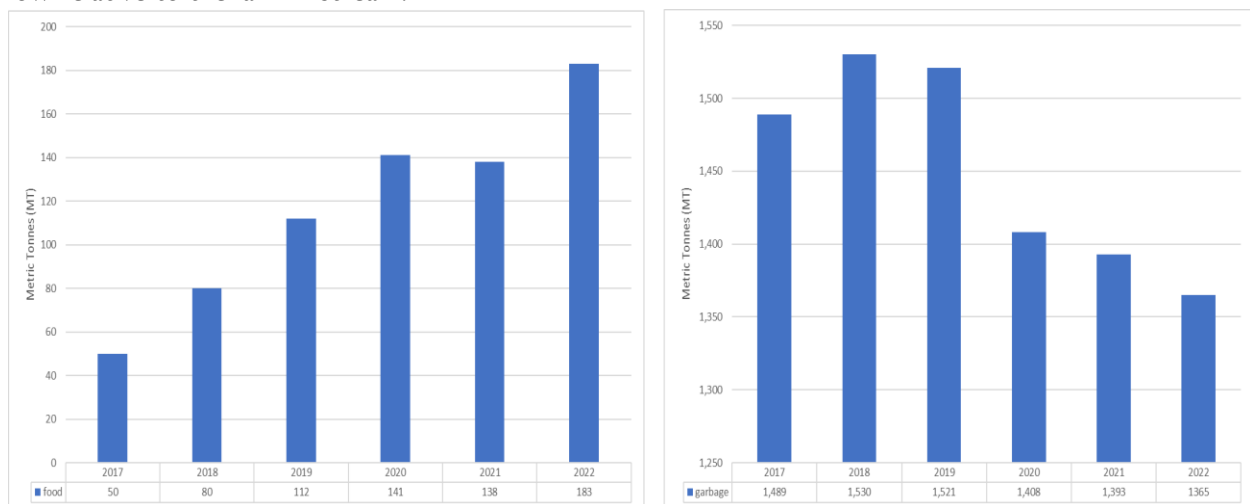


Figure 9: Comparison of residential food scraps & landfill streams 2017-2022

As a part of the waste diversion tactics approved in 2019, 43 food scraps bins and 21 recycling bins were deployed across the community to improve convenience of waste diversion programs for residents. A variety of community-based social marketing techniques and targeted education programs have been conducted, in addition to ongoing public communications efforts.

Type of Bin	2018	2023
Food Scraps	5	48
Recycling	56	77
Landfill	108	90
Total # “Zero Waste Stations” (Food Scraps, Recycling, Landfill)	5	48

However, the residential diversion rate remains low at 31% which is 7% above the 2017-2018 baseline average of 24%. In contrast, non-residential sector waste diversion has increased by 22%, notably following a ban on food scraps & recycling from the non-residential landfill stream alongside active enforcement efforts.

Waste characterization data, which was separated by complete “zero waste stations” (locations that have Food Scraps, Recycling, and Landfill) and “lone ranger” landfill bins (locations that only have a landfill bin), indicates that the most significant waste diversion opportunity for residents is composting food scraps and food-soiled paper. A significant amount of easily recyclable mixed paper was also found in the landfill stream. On average, the diversion rate for “zero waste stations” was 10% higher than “lone ranger” landfill bins, which reaffirms that convenience is a factor for residents to recycle and compost their food scraps.

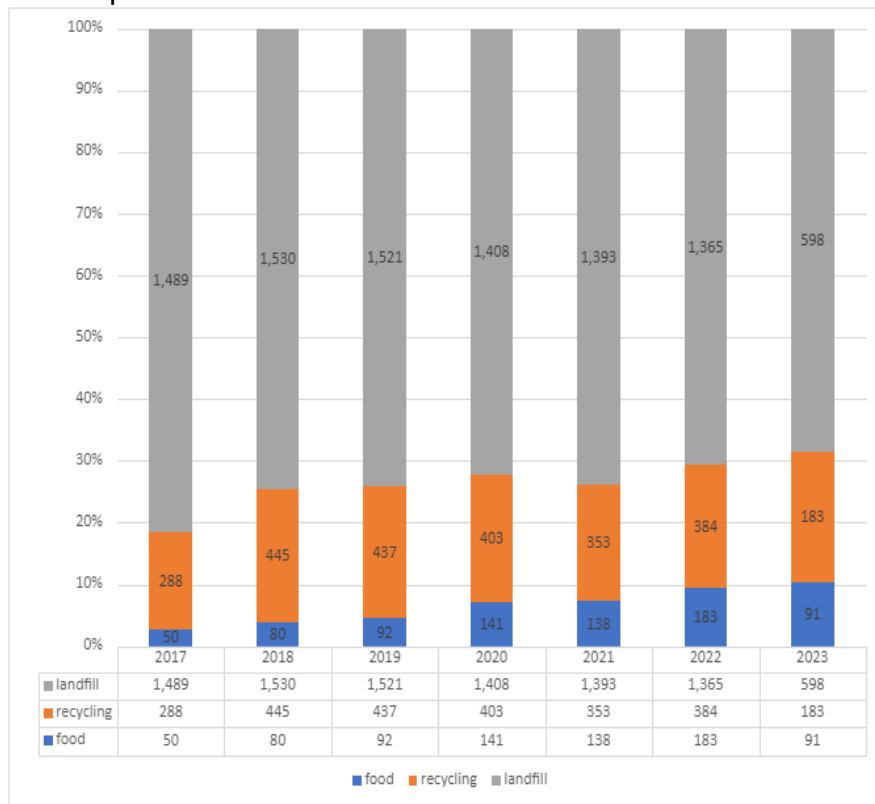


Figure 10: Composition of residential sector waste 2017-2022 (MT)

Elevated public communications in conjunction with existing targeted education efforts would likely improve waste diversion in the residential sector. However, the challenge remains in the Town's ongoing population turnover, which makes the demand for public communication and education both continual and significant. In the absence of improvement through elevated public communications, it is likely that the Town will need to consider systems that would instill a sense of accountability among the users of the residential waste system, to move away from the current situation which is entirely voluntary and anonymous. Possibilities for tactics that would increase accountability are outlined below.

An additional ongoing theme for the residential waste streams is physical accessibility. Efforts have been made by the Resource Recovery team to create more accessible stations, however there are still a number of challenges for residents in the community experiencing different mobility challenges. Going forward, it will be important to consider meeting those residents where they are at in our residential waste systems. For example, the Town of Canmore and City of Edmonton provide a curbside collection service for residents who need assistance setting out their waste for collection.³

Table 4. Residential Waste Diversion Strategies & Actions

Priority Actions	Type	Waste Hierarchy Alignment				Budget Implications
		Rethink	Reduce	Reuse	Recycle	
R1. Accessibility of Zero Waste Stations						
Ensure all Banff residents have easy access to every waste stream, along with tools to participate in zero waste initiatives						
Add additional food scraps & recycling bins to remaining landfill bins in areas where there aren't complete stations	Convenience				x	Existing capital budget
Pilot and evaluate effectiveness of free, criteria-based pickup service for older adults & residents with accessibility challenges	Convenience				x	TBC
Collaborate with the Bottle Depot to promote their "Skip the Depot" pickup service, and/or explore possibilities for additional return points for refundable beverage containers.	Convenience				x	Staff time
R2. Elevated Public Communications						
Elevate residential waste sorting as priority message on ToB public communications channels						
Elevate residential waste sorting as priority message on ToB public communications channels; focus on shifting social norm in relation to climate action campaign; privilege of living in a national park i.e., "the Banff way"	Public Communications			x	x	\$15,000 annually (2024-2026)
Through educational videos & information sharing, increase transparency of waste issues to increase awareness & instill trust in waste systems among Banff's community	Public Communications					
Expand educational signage "at the bin" to be more interpretive, ongoing, and engaging; focus on material specific campaigns using waste characterization data, primarily: <ul style="list-style-type: none"> - Food scraps & food-soiled paper - Mixed paper - Large items & textiles 	Public Communications			x	x	
Ensure all signage meets appropriate plain language standards, and explore translation opportunities, focusing on key languages spoken in the Bow Valley	Public Communications				x	
Work with Biosphere Institute to integrate zero waste education into existing school & youth program initiatives	Public Communications			x	x	Existing Biosphere Operating Grant
R3. Employer Engagement/Staff Accommodations						
Through employer engagement, engage Banff's seasonal population on environmental responsibilities that come with living in Banff National Park						
Finalize refreshed zero waste training program focusing on 3 I's: "Inspire, Instruct, Involve" (including adding gamified waste wizard) and gain commitment from large	Public Communications			x	x	Existing budgets

³ City of Edmonton: https://www.edmonton.ca/programs_services/garbage_waste/garbage-collection-assisted; <https://canmore.ca/residents/family-community-services/emotional-support/seniors-programs>

employers to implement; integrate with BLLT ambassador program & expand to smaller employers						
Foster community engagement in zero waste and environmental initiatives by providing ongoing volunteer opportunities (“involve” component of employer engagement)	Public Communications			x	x	Staff time
Continue working with staff accommodation managers to improve waste sorting setups in rooms & resident communication (seasonal check-ins ongoing)	Public Communications				x	
Work with staff accommodations to improve & share best practices on lending/sharing economy initiatives (ex. Tinu Lending Library, Banff Springs Repeat Boutique)	Convenience	x	x	x		Staff time; possible grant funding
Provide grant funding and/or rebate for staff accommodations to set up community fridges, to prevent edible food from becoming waste	Convenience			x		
R4. Accountability at Zero Waste Stations						
Explore possibilities such as technology solutions or a bylaw that would increase accountability in Banff’s residential waste system						
Evaluate the feasibility of various possibilities that may increase accountability in Banff’s residential waste system, such as: <ul style="list-style-type: none"> - Piloting a system where residents are assigned to a bin through FOB/lock system & evaluate potential to support on community-wide scale - With locking system, consider adding fill line sensors to bins to improve collections efficiencies and reduce transportation-related emissions - Consider opportunities to track data by waste bin tip/neighbourhood, to instill accountability among residents and improve collection efficiencies. - An update to the residential waste bylaw that would ban food scraps & recycling from the landfill, and ban illegal dumping; install cameras at problematic stations & conduct semi-regular audits to enforce 	Regulatory				x	\$10,000 in 2025 (for consultant to assess options)

2. Non-Residential Waste Diversion

Non-Residential Snapshot	
Annual Landfill Waste (MT)	1335*
Percentage % of Total Landfill	51%*
Baseline Diversion	33%
Current Diversion	54%



*2022

Significant waste diversion progress has been made by Banff’s non-residential sector. Waste diversion has increased by 21%, from a 33% baseline in 2017-2018 to 54% in 2023. Landfill waste in 2022 was at 70% of pre-pandemic levels, despite diverted materials increasing above pre-pandemic levels.

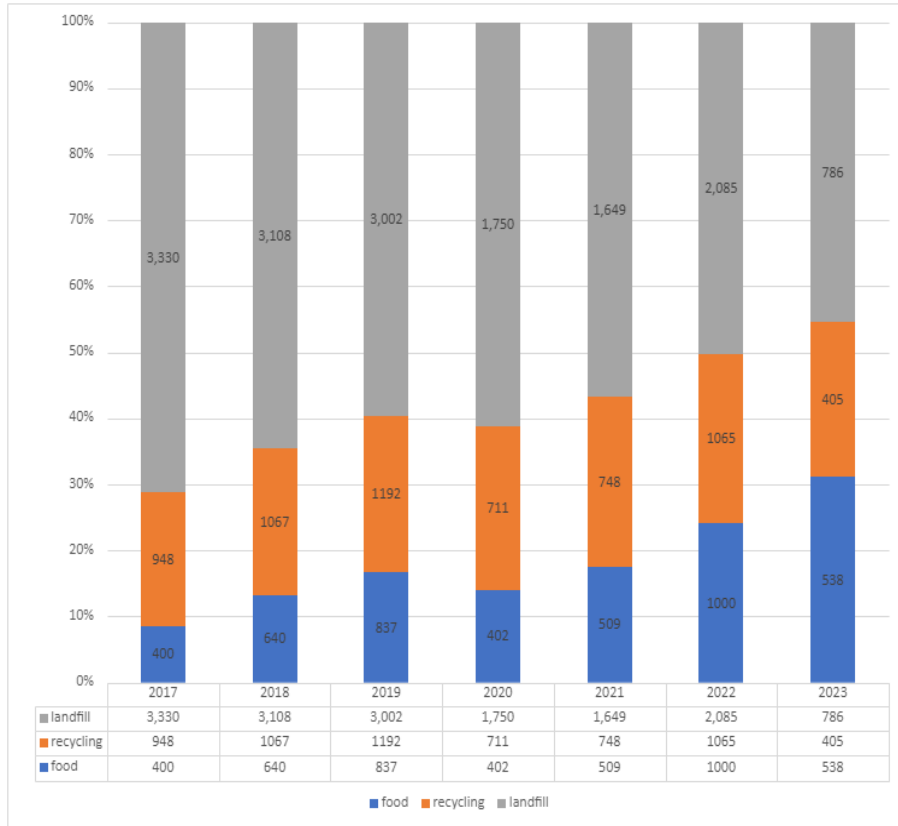


Figure 11: Composition of non-residential sector waste 2017-2022 (MT)

As composting of food scraps & food-soiled paper has doubled since the baseline year, a significant landfill waste reduction has been observed.

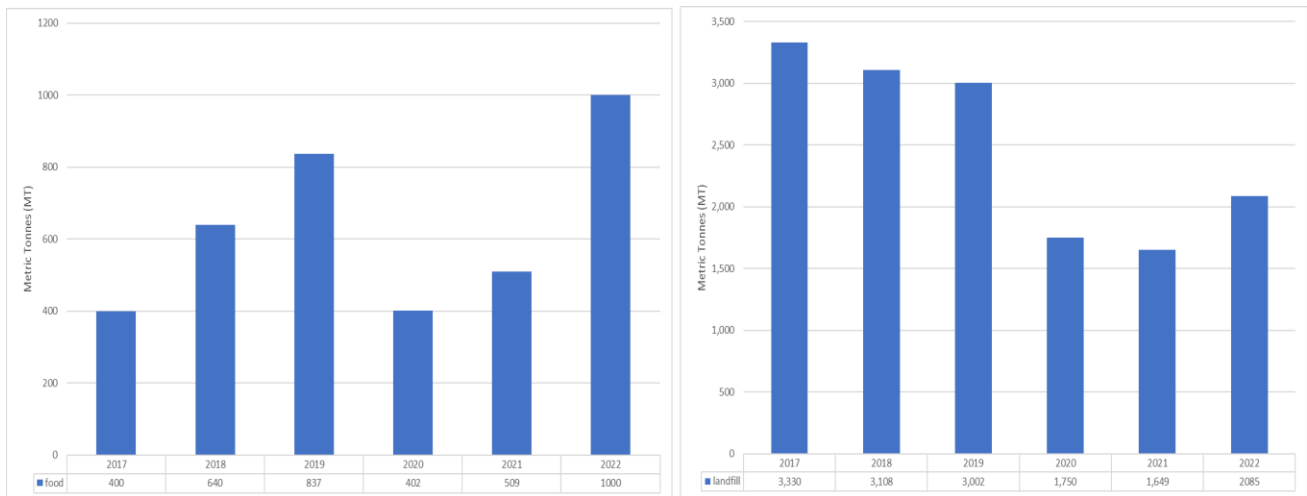


Figure 12: Comparison of non-residential food scraps & landfill streams 2017-2022

With ongoing incremental improvements in non-residential sector waste diversion, and initiatives in place that will eliminate sources of non-residential waste (ex. SUI Reduction Bylaw), this focus area requires more of a “maintain” lens, and fewer new actions are needed. The priority need in this area is to increase collection resources to enable Resource Recovery to provide 7 day/week pickup service for all streams in the non-residential sector. The need for this is a result of increasing waste diversion

among all commercial streams, increasing population and visitation levels, and commercial intensification with food service establishments in Banff's community.


Waste characterization data, which was separated by "restaurants" and "hotels", indicates that the most significant opportunity for the non-residential sector remains in hotel settings, specifically with respect to sorting of recyclables, composting food scraps, and reducing single-use items. Significant progress was observed in the "restaurants" stream, notably following the implementation of the food & recycling material ban for non-residential sector entities, which currently is not being enforced for the hotel sector.

Table 5. Non-Residential Waste Diversion Strategies & Actions

Priority Actions	Type	Waste Hierarchy Alignment				Funding
		Rethink	Reduce	Reuse	Recycle	
NR 1. Food & Recycling Ban						
Ongoing compliance improvement with non-residential food & recycling ban						
Continue to monitor and evaluate compliance on an ongoing basis, using existing systems, with non-residential waste bylaw 377	Regulatory				x	Staff time
Consider enforcing section 6.2.3. of the non-residential waste bylaw regarding on site recycling requirements where needed to clarify & improve user experience	Regulatory				x	
Enable 7 day/week food pickup service for NR food by increasing Resource Recovery staff and purchasing an additional truck	Convenience				x	\$320,000 + operating cost of \$216,000 annually
Require data reporting from any private waste hauler, through business licensing process	Regulatory				x	Staff time
Incentivize replacement of paper towel dispensers for hand dryers; conduct targeted campaign on paper towel composting where dryers are not possible, to reduce paper towel landfill waste	Convenience		x		x	Environmental Rebates Budget
In all non-residential waste enclosures, replace existing bins with refreshed colour coded set including thorough signage	Public Communications				x	Existing budgets
Enforce cleanliness standards in waste enclosures as per Section 5.6A of Non-residential waste bylaw 377 on an ongoing basis	Convenience				x	Staff time
NR 2. Hotel Sector Waste Sorting						
Work with hotel sector toward better waste sorting options in guest rooms & enclosures, to improve diversion rates						
Improve guest-facing waste sorting options, focusing on recycling in particular - target materials like refundable beverage containers & paper/cardboard (pizza boxes)	Convenience /Public Communications				x	Staff time
Pending performance, consider update to bylaw that would include hotel sector in bylaw compliance requirements	Regulatory				x	
NR3. Public Communications & Leadership						
Continue working with non-residential sector representatives to lead by example in moving toward zero waste						
Continue working with the Business Environmental Leadership working group and expand scope to climate action	Public Communications	x	x			\$5,000 annually (2024-2026)
Increase marketing of existing Zero Waste Trailblazers (expand to other areas of climate) while collaborating on "Before You're Here" messaging & visitor-facing campaign	Public Communications	x	x			
NR4. Food Rescue & Preventing Food Waste						
Continue supporting programs that move up the waste hierarchy to prevent food waste from happening in the first place						
Continue funding Banff Food Rescue	Convenience			x		Existing budgets
Run a food waste prevention challenge that highlights work of local businesses, Banff Food Rescue, the Food Sharing Act (allows for food donation without liability) and software technologies that help with source reduction	Public Communications	x	x			Staff time

3. Single-Use Items & Packaging Reduction

SUI & Packaging Snapshot	
Annual Landfill Waste (MT)	171*
Percentage % of Total Landfill	5%*
Baseline Diversion	n/a – only measured from landfill
Current Diversion	



*2022

Single-use items are a highly visible type of waste that is seen and experienced by residents, businesses, and visitors alike. As such, the Town of Banff has developed a Single-Use Item Reduction Strategy that combines voluntary and regulatory measures, including a Bylaw, that will help reduce Single-Use Items. Taking action to reduce single-use items is one of many ways that the Town can lead by example and have residents and visitors from around the globe participate in zero waste practices that lessen our impact on the environment.

The focus in 2023 & early 2024 will be on supporting businesses to reach compliance with the bylaw, in particular the requirement to provide reusables for on-site dining. Another major focus area will be tackling reusables for takeaway services through the Bow Valley Isn't Disposable (BID) initiative, now under Biosphere Institute of the Bow Valley. Tackling this extremely prevalent waste stream through collaboration with BID and local business associations will be an ongoing focus area in the coming years as well.


Waste characterization data showed that single-use items comprise about 7% of the non-residential waste stream and 2% of the residential waste stream; however, the overall percentage of single-use items that Banff sends to landfill is likely more significant than those percentages indicate. This is because the pedestrian bin waste stream was not included in the audits, and that is where the majority of single-use waste is disposed of. Other types of packaging waste were significant in the landfill component of the waste characterization study as well, such as non-recyclable plastic at 12%.

Table 6. SUI & Packaging Strategies & Actions

Priority Actions	Type	Waste Hierarchy Alignment				Funding
		Rethink	Reduce	Reuse	Recycle	
SI. SUI Reduction Bylaw Implementation						
Ongoing implementation of SUI bylaw, focusing on getting businesses “back to the basics” with reusables						
Continue education & outreach to businesses impacted by SUI bylaw, focusing on those that require reusables for on-site dining	Regulatory/Education		x			Staff time
Continually monitor & evaluate bylaw compliance, focusing on requirement to provide reusables for on-site dining	Regulatory		x			
Evaluate impacts of SUI bylaw and consider possible second iteration which could include: <ul style="list-style-type: none"> Requirements on reusables for takeaway food ware Eco "fees" where additional charges on SUI and/or packaging are redirected into environmental funds Ban on sale of bottled/boxed water below certain volume 	Regulatory	x	x			
Expand existing business license conditions around SUI bylaw to include broader environmental criteria that must be met when opening a business in Banff	Regulatory					

S2. Reusables for Takeaway Services						
Collaborate with business and non-profit sector partners to work toward a Banff-wide reusable system for takeaway cups & containers						
Work with Biosphere & commercial sector representatives to understand learnings of 2022 feasibility study & determine appropriate next steps & funding source	Convenience	x	x	x		Existing grant funding for Biosphere
Support pilot programs in Banff by funding infrastructure needs such as a washing facility, drop-off points, and/or refill stations (see action S4. Water)	Convenience	x	x	x		\$15,000 for 2024-2026
Expand pilot to larger scale that is visitor friendly with strong interoperability	Convenience	x	x	x		
S3. Procurement & Packaging						
Collaborate with non-residential sector representatives on procurement & other solutions to eliminate packaging waste at the source						
Work with Business Environmental Leadership Working Group (restaurants, hotels, food-service providers) to determine key waste & emissions reduction opportunities in procurement practices; use learnings to support other Banff businesses to adopt sustainable procurement practices	Convenience	x	x		x	Staff time
Work with local grocery stores to accelerate uptake of reuse options for food & other products	Convenience	x	x			
Based on learnings from procurement efforts, explore opportunities to reduce non-recyclable film plastic (packaging) through communication/advocacy to large suppliers	Convenience	x	x			
Improve ToB systems and/or work with private haulers to expand film plastics recycling efforts, for unavoidable packaging waste	Convenience				x	
S4. Water						
Reduce consumption of bottled water in Banff & the broader park area						
Encourage & provide possible funding to non-residential sector entities to install water refill stations in places like hotel lobbies, areas frequented by visitors	Convenience		x			See action .
Develop specific messaging focused on Banff tap water to be displayed in refill stations and other visitor-facing areas/platforms	Public Communications		x			
S5. Municipal Facilities & Events						
Town of Banff leads by example with respect to SUI reduction & sustainable procurement practices						
Establish "single-use free zones" at TOB facilities where reusable cups & containers are available for staff to borrow	Convenience		x	x		Staff time
Update policies to ban single-use items from TOB programs & events	Regulatory		x			

4. Reducing Consumption

Reducing Consumption Snapshot		
Annual Landfill Waste (MT)	224	
Percentage % of Total Waste	6% ("Sundry" waste)	
Baseline Diversion Current Diversion	n/a – landfilled metrics only	

*2022

A thriving sharing economy is particularly relevant in Banff, where many short-term residents need items for a period of time while residing in the community, and then subsequently need to dispose of them when they leave. For environmental and affordability reasons, making items available at low-no cost to borrow and share, becomes critical in Banff’s context.

In 2020, Banff participated in the Recycling Council of Alberta’s Circular Communities initiatives, which helped the Town roadmap key initiatives that could advance Banff’s circular economy. Additionally, a community asset mapping process identified both existing strengths along with gaps in the community with respect to opportunities to share, repair, or reuse.

The launch of the Library of Things, in close partnership with the Banff Public Library, was a tangible outcome of these processes. In its first two years of operation, over 2000 items have been circulated through the Library of Things which equates to an estimated community cost savings of over \$200,000 as a result of residents not needing to buy these items new. While exact numbers are difficult to calculate, this also equates to significant avoidance of waste and consumption-based emissions.

The Library of Things has become a well-loved asset among Banff’s community, serving a variety of short and long term residents and diverse demographics. As such, the main opportunity going forward will be to seek resources to sustain and expand existing item lending services, along with related educational programming like repair café style workshops.



Figure 13: Top items circulated at the Library of Things and associated cost savings

Table 7. Reducing Consumption Strategies & Actions

Priority Actions	Type	Waste Hierarchy Alignment				Funding
		Rethink	Reduce	Reuse	Recycle	
C1. Library of Things & Circular Economy Hub Advance Banff's sharing opportunity through ongoing collaboration with, and funding support for, the Library of Things						
Expand long-term funding agreement with Banff Public Library to include one additional FTE & funding for ongoing replacement costs of items, for the Library of Things	Convenience		x	x		\$70,000 ongoing
Continue collaborating with library staff to implement workshops & programming focused on "Share, Repair, Reuse" opportunities i.e., swaps, repair cafes;	Public Communications	x	x		x	Staff time
Host monthly community swaps with a focus on clothing/textiles, to provide an additional reuse option						
C2. Drop-Off Yard & Reuse It Centre Increase diversion at the Drop-Off Yard, as well as access to "take it or leave it" style reuse opportunities, like the Reuse It Centre						
Develop system to track materials (incoming, outgoing) at Banff Reuse It Centre	Convenience			x		Staff Time
Determine most appropriate enhancements for Reuse It Centre & budget needs	Convenience			x		Staff time & possible grant funding
Seek centralized, accessible space (possible circular economy "hub") for additional Reuse It Centre and/or "pay it forward" program where people can donate items for new residents who do not come to Banff with anything	Convenience			x		

5. Pedestrian Bin Waste Streams

Pedestrian Bin Waste Streams	
Annual Landfill Waste (MT)	121*
Percentage % of Total Landfill	3%*
Baseline Diversion	n/a –
Current Diversion	landfilled metrics only



*2022

As the most visible waste stream in Banff, it is extremely important that waste in public spaces reflects the Town's zero waste goals. Unfortunately, this is currently not reality, as the pedestrian bin waste streams are by far the most contaminated in Town, with the lowest recycling rate. As a result of confusion around what goes where in the pedestrian bin waste streams, the only material that can be recovered from the pedestrian bin waste stream is refundable beverage containers. It is worth noting that single-use items are a major source of contamination in the pedestrian bin, regardless of whether they are recyclable, compostable, or landfill.

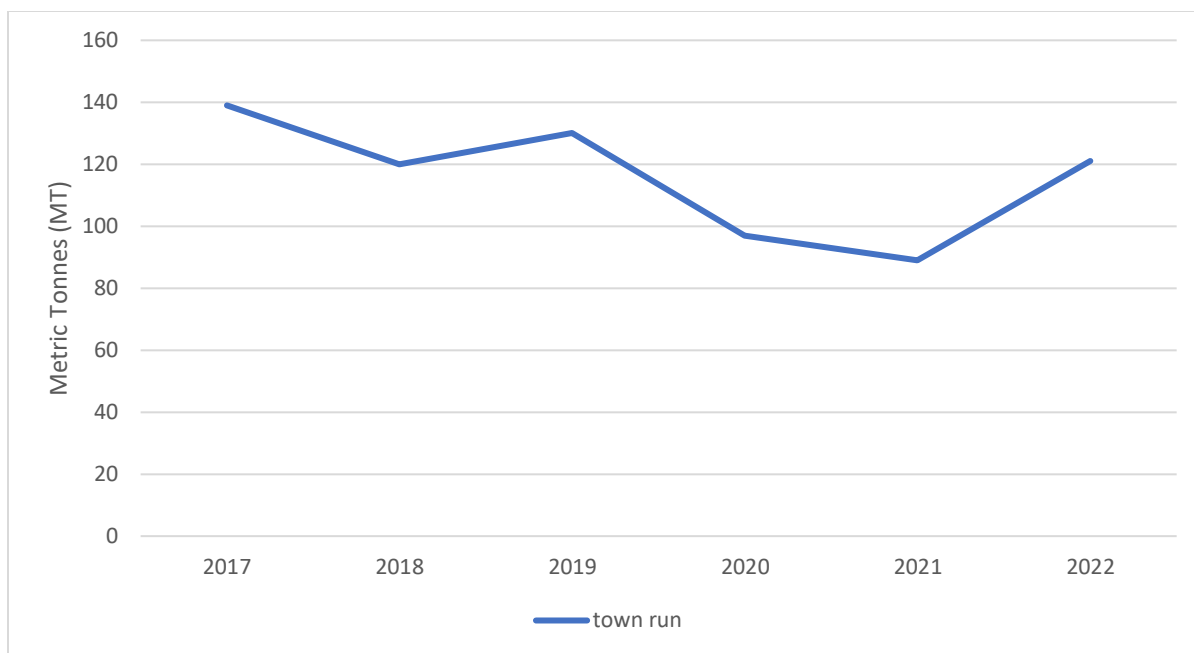


Figure 14: Material landfilled from pedestrian bin waste streams or “Town Run” from 2017-2022 (MT)

In 2020, the first food scraps stream was piloted in the pedestrian bin waste streams as a part of Bear Street redevelopments. Significant contamination in the food scraps stream indicates that additional effort will be required to make strides on pedestrian bin waste diversion. Possibilities may include:


- Improved signage
- Changing streams to represent the realities of the pedestrian bin waste stream
- Source reduction efforts like the SUI bylaw and/or pay-as-you-throw (PAYT) systems

Table 8. Pedestrian Bin Waste Streams Strategies & Actions

Priority Actions	Type	Waste Hierarchy Alignment				Funding
		Rethink	Reduce	Reuse	Recycle	
PI. Improve User Experience of Pedestrian Waste Streams						
Maximize reduction & diversion in pedestrian waste streams by creating a more intuitive user experience						
Study pedestrian bin waste stream to better understand key barriers, areas of confusion, and possible interventions	Convenience			x	x	Existing budgets
On 100 & 200 blocks of Banff Avenue, pilot different solutions to determine the most effective ways to improve pedestrian bin waste collection in the public realm, including appropriate streams, shapes, decals, and any other relevant refresh needed; include possible reuse stream	Convenience			x	x	\$7,500 in 2026 + grant funding
Expand pilot to all other public realm areas	Convenience			x	x	Staff time
P2. PAYT in Pedestrian Bin Waste Streams						
Integrate a financial disincentive for non-residential sector entities who generate waste that ends up in the public realm						
Explore possibility of PAYT financial structure for public realm waste streams	Regulatory		x			Staff time

6. Construction, Renovation & Demolition (CRD) Materials

Construction, Renovation & Demolition Snapshot	
Annual Landfill Waste (MT)	2054*
Percentage % of Total Landfill (when included overall)	46%*
Baseline Diversion	47%
Current Diversion	67%



*2022

Construction, renovation, and demolition (CRD) waste that is generated by development of the built environment is currently not factored into the Town of Banff's diversion rate accounting. However, if it were, it would roughly double the Town's waste footprint. While tracking CRD materials in conjunction with regular Municipal Solid Waste (MSW) materials would, at time, skew waste diversion rates, it is important to track materials, nonetheless. As such, a separate indicator has been dedicated to track CRD waste diversion rates as a part of ongoing waste data reporting.

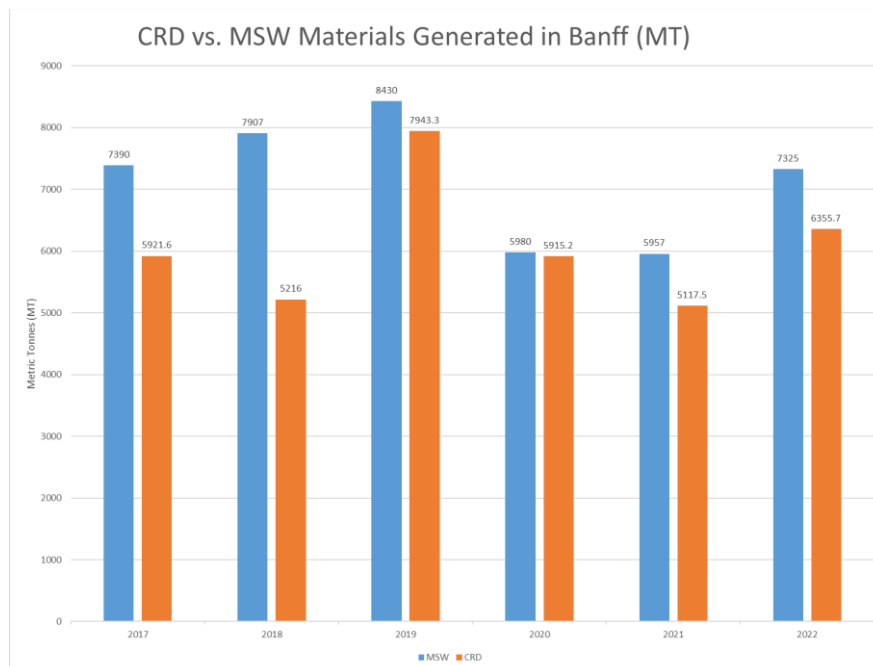


Figure 15: Comparison of construction, renovation & demolition (CRD) sector materials with municipal solid waste (MSW) materials 2017-2022 *note does not include excavated material

Significant progress has been made when it comes to diversion of CRD materials in the Bow Valley in past years, largely due to efforts to increase diversion among staff at the Francis Cooke Resource Recovery facility, where many materials are dropped off for recycling & disposal. The most significant opportunity to improve is in the “rethink” layer of the waste hierarchy for these streams, involving looking at waste prevention, reuse/salvage, and design for deconstruction. Furthermore, there is a strong opportunity to connect how we design & plan for disposal of building materials with emissions accounting, in particular when it comes to embodied emissions involved with the built environment.

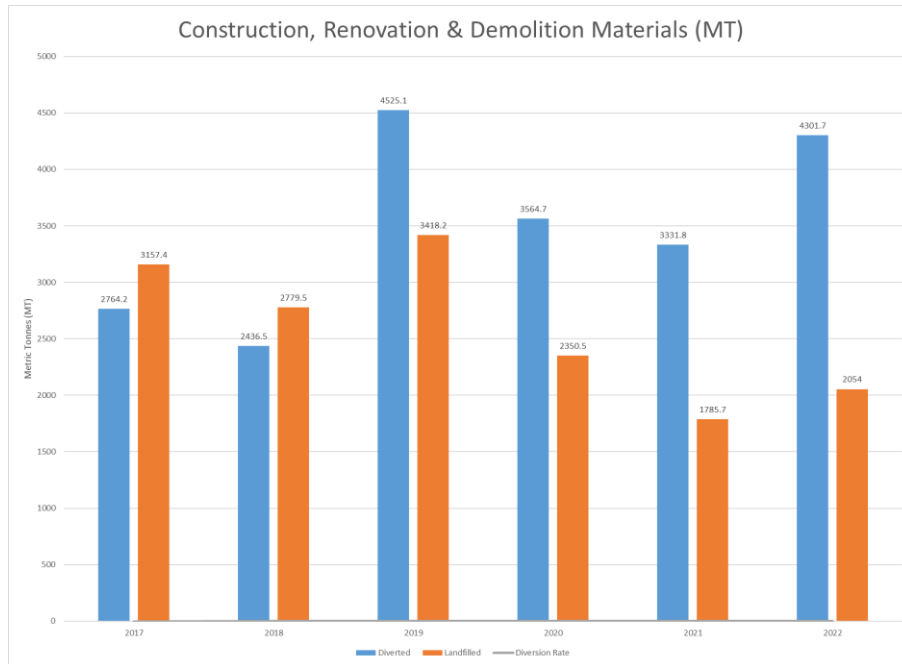


Figure 16: Construction, renovation & demolition (CRD) waste from Banff projects managed at Francis Cooke Resource Recovery Facility 2017-2022

Table 9. CRD Materials Actions

Priority Actions	Type	Waste Hierarchy Alignment				Funding
		Rethink	Reduce	Reuse	Recycle	
D1. Development & Building Permit Processes						
Use existing DP & BP processes to reduce waste generated by projects						
Leverage existing compliance reporting system and follow up on project tracking, final reporting, etc.	Regulatory/ Public Communications			x	x	Staff time
Add financial accountability to compliance reporting system by building in performance bond	Regulatory			x	x	
Work with Biosphere, Town of Canmore, and other regional partners to determine broader approach to improve sorting & diversion systems.	Convenience		x	x	x	Staff time/existing budgets
Investigate possibility of financial incentives & disincentives at ToB Waste Transfer Site & Francis Cooke	Regulatory			x	x	Staff time
D2. Circular Building Practices						
Normalize circular building processes by collaborating with industry partners and sharing best practices						
Collaborate with Biosphere & Bow Valley Building Owners and Developers Association (BOWDA) to develop and promote local case studies/"how-to" resources across building types to promote energy efficiency, on-site waste prevention and diversion, design for disassembly, and responsible material sourcing.	Regulatory/ Public Communications	x	x	x		Existing Budgets
Collaborate with Biosphere & BOWDA to develop an industry awards program for CRD waste diversion modelled on the Trailblazers program by recognizing and celebrating local architects and contractors for low-carbon and low-waste features of their residential and commercial projects.	Regulatory	x	x	x	x	Existing Budgets/Staff Time
D3. Material Reuse						
Incentivize reuse of existing materials & resources in development projects						
Allow permit-based scavenging at the Waste Transfer Site to increase the amount of material reused and recycled, resulting in high indicators for energy saving, pollution	Convenience			x		Staff time

prevention, landfill lifetime extension, and community economic benefit- particularly to small-scale artisans.						
Investigate the possibility of a small-scale Material Reuse Facility, possibly integrated with the Reuse-It Centre, to provide Banff residents, businesses, and small-scale artisans with the opportunity to access a range of high-quality, low-cost building materials selected from materials dropped at the Waste Transfer Site.	Convenience			x		Staff time/possible grant funding
Require publication in the local newspaper of all building demolition permit applications to solicit salvage of reusable items by deconstruction firms	Public Communications			x		Staff time
D4. Municipal Buildings						
Town of Banff leads by example in demonstrating zero waste & circular building practices						
Buy composted soil for projects and develop policies to support its use, particularly for new development	Convenience			x		Staff time
Work with internal teams (ex. engineering to incorporate design for deconstruction & recyclability of materials for new ToB facilities.	Convenience	x	x			
Add update to the Municipal Buildings Policy to elevate circular design practices, etc.	Regulatory	x				
Establish an embodied carbon baseline for recent Town of Banff buildings and establish an embodied carbon reduction target from this baseline, like the City of Vancouver's Embodied Carbon Reduction Goal (40% reduction by 2030).	Regulatory	x				
Integrate CE Building Principles into the Banff Design Guidelines through highlighting the importance of on-site waste prevention and diversion, design for disassembly, and responsible material sourcing.	Convenience	x				

7. Material Management & Emissions

Evaluating the effectiveness of how to divert and dispose of various materials that are managed through Resource Recovery operations is an ongoing priority related to moving toward zero waste. With recycling and organics management options often in flux, continually evaluating the impact of how materials are managed is important to ensure we are maximizing raw material resources and monitoring emissions impacts.

In 2022, emissions generated by Banff's landfill waste were estimated to be 3858 tCO₂e. In turn, it is estimated that approximately 2203 tCO₂e were avoided by separating food scraps and composting them instead of sending them to the landfill. Composting the separated organic material reduces emissions since the decomposition occurs aerobically, producing no methane.

Comparatively, all of the Town of Banff facilities generated approximately 5900 tCO₂e emissions in 2022 through the use of natural gas and electricity. As such, how the municipality manages waste can have a significant impact in reducing emissions that are generated within our jurisdiction. With climate action as a high priority in the Town of Banff's Strategic Plan, actions to reduce waste-related emissions, along with continual monitoring and reporting of these emissions, will be critical.

Table 10. Material Management & Emissions Actions

Priority Actions	Type	Waste Hierarchy Alignment				Funding
		Rethink	Reduce	Reuse	Recycle	
M1. Material Management & Emissions						
Continually monitor the way in which Town of Banff collects, transfers, and processes materials to maximize waste diversion potential and minimize emissions						
Hire a full time Reuse-It & Drop-Off Yard Attendant to help users properly divert recyclable materials and dispose of residuals where needed	Convenience				x	\$75,000 annual operating
Prioritize landfill waste disposal to ensure closest possible facility proximity and landfill methane gas capture	Convenience	x				TBD
On an annual basis, report on landfill emissions and transportation emissions associated with waste produced in the Town's jurisdiction.	Regulatory	x				Staff time

Appendix A. Monitoring and Reporting

The Town of Banff will provide Council and the public with an annual progress update on targets and indicators as outlined above. A dashboard has also been launched on BanffZeroWasteTrail.ca to increase data transparency to the public on a continual basis. Appendix A provides a template for future reporting on indicators.

Type	Indicator	Baseline (2017-2018 Average)	Current (2022)
Circular Economy	Materials Reused at Re-Use It Centre (MT)	n/a – currently working on tracking system	
	Total Items Borrowed at Library of Things (#)	0	2113 *2023 YTD
	Library of Things Unique Users (#)	n/a	695 *2023 YTD
	Businesses Offering Reusable Takeaway (#)	0	0
	Food Rescued by Banff Food Rescue Annually (MT)	32	140
	Residents Accessing Banff Food Rescue Annually (#)	1200	6223
	“Sundry” Waste (MT)	131	224
	CRD Materials Reused (MT)	n/a – currently working on tracking system	
Waste Diversion	Community-Wide Waste Diversion (%)	35%	52% *2023 YTD
	Non-residential Sector Waste Diversion (%)	32%	54% *2023 YTD
	Residential Sector Waste Diversion (%)	23%	31% *2023 YTD
	CRD Sector Waste Diversion (%)	45%	68%
Material-Stream Specific	Total Landfill Waste (MT) <i>*includes Sundry & Town Run</i>	4859	3450
	Total Landfill Waste per Capita (KG/capita) <i>*not including visitor adjusted population</i>	587	393
	Residential Landfill Waste per Capita (KG/capita)	174	141
	Diversion of Food Scraps & Food-Soiled Paper (MT)	585	1183
	Diversion of Mixed Recyclables (MT) <i>*includes cardboard</i>	1236	1449
	“Town Run” (Pedestrian Bin) Waste; SUI (MT)	130	121
Emissions & Embodied Carbon	Landfill waste emissions (tCO ₂ e)	n/a – not confident in previous waste characterization data	3858
	Emissions avoided by composting (tCO ₂ e)	1090	2203
	Transportations emissions associated with waste hauling (tCO ₂ e)	222	164
	Emissions associated with fuel consumption in-town (tCO ₂ e)	n/a – no tracking system was in place	149

Appendix B. Timing of All Strategies & Actions

Priority Strategy Areas & Actions		2023	2024	2025	2026	2027	2028
I. Residential Waste Streams							
R1. Accessibility of Zero Waste Stations	Add additional food scraps & recycling bins to remaining landfill bins in areas where there aren't complete stations						
	Pilot and evaluate effectiveness of free, criteria-based pickup service for older adults & residents with accessibility challenges						
	Collaborate with the Bottle Depot to promote their "Skip the Depot" pickup service, and/or explore possibilities for additional return points for refundable beverage containers.						
R2. Elevated Public Communications	Elevate residential waste sorting as priority message on ToB public communications channels; focus on shifting social norm in relation to climate action campaign; national park responsibilities i.e., "the Banff way"						
	Through educational videos & information sharing, increase transparency of waste issues to improve trust & accountability among Banff's community						
	Expand educational signage "at the bin" to be more interpretive, ongoing, and engaging; focus on material specific campaigns using waste characterization data, primarily: <ul style="list-style-type: none"> - Food scraps & food-soiled paper - Mixed paper 						
	Large items & textiles						
	Ensure all signage meets appropriate plain language standards, and explore translation opportunities, focusing on key languages spoken in the Bow Valley						
Work with Biosphere Institute to integrate zero waste education into existing school & youth program initiatives							
R3. Employer Engagement/Staff Accommodations	Finalize refreshed zero waste training program focusing on 3 I's: "Inspire, Instruct, Involve" (including adding gamified waste wizard) and gain commitment from large employers to implement; integrate with BLLT ambassador program & expand to smaller employers						
	Foster community engagement in zero waste and environmental initiatives by establishing ongoing volunteer opportunities ("involve" component of employer engagement)						
	Continue working with staff accommodation managers to improve waste sorting setups in rooms & resident communication (seasonal check-ins ongoing)						
	Work with staff accommodations to improve & share best practices on lending/sharing economy initiatives (ex. Tinu Lending Library, Banff Springs Repeat Boutique)						
	Provide grant funding and/or rebate for staff accommodations to set up community fridges, to prevent edible food from becoming waste						
R4. Accountability at Zero Waste Stations	Evaluate the feasibility of various possibilities that may increase accountability in Banff's residential waste system, such as: <ul style="list-style-type: none"> - Piloting a system where residents are assigned to a bin through FOB/lock system & evaluate potential to support on community-wide scale - With locking system, consider adding fill line sensors to bins to improve collections efficiencies and reduce transportation-related emissions - Consider opportunities to track data by waste bin tip/neighbourhood, to instill accountability among residents and improve collection efficiencies. - An update to the residential waste bylaw that would ban food scraps & recycling from the landfill, and ban illegal dumping; install cameras at problematic stations & conduct semi-regular audits to enforce 						
2. Non-Residential Waste Streams							
NR1. Food & Recycling Ban	Continue to monitor and evaluate compliance on an ongoing basis, using existing systems, with non-residential waste bylaw 377 (Food & Recycling Ban)						
	Consider enforcing section 6.2.3. of the NR waste bylaw regarding on site recycling requirements where needed to clarify & improve user experience						
	Enable 7 day/week pickup service for NR food by increasing Resource Recovery FTE count, purchase of a new truck, and maintenance of existing trucks						
	Require data reporting from any private waste hauler, through business licensing process						
	Incentivize replacement of paper towel dispensers for hand dryers; conduct targeted campaign on paper towel composting where dryers are not possible						
	In all non-residential waste enclosures, replace existing bins with refreshed colour coded set including thorough signage						
	Enforce cleanliness standards as per Section 5.6A of Non-residential waste bylaw 377 on an ongoing basis						
NR2. Hotel Room Waste Sorting	Improve guest-facing waste sorting options, focusing on recycling in particular - target materials like refundable beverage containers & paper/cardboard (pizza boxes)						

	Pending performance, consider update to bylaw that would include hotel sector in bylaw compliance requirements								
NR3. Public Communications & Leadership	Continue working with the Business Environmental Leadership working group on relevant topics & expand scope to climate action								
	Increase marketing of existing Zero Waste Trailblazers (expand to other areas of climate) while collaborating on "Before You're Here" messaging & visitor-facing campaign								
NR4. Food Rescue & Waste Prevention	Continue funding Banff Food Rescue								
	Run a food waste prevention challenge that highlights work of local businesses, Banff Food Rescue, the Food Sharing Act (allows for food donation without liability) and software technologies that help with source reduction								
3. SUI Reduction & Packaging Reduction									
S1. SUI Reduction Bylaw Implementation	Continue education & outreach to businesses impacted by SUI bylaw, focusing on those that require reusables for on-site dining								
	Continually monitor & evaluate bylaw compliance, focusing on requirement to provide reusables for on-site dining								
	Evaluate impacts of SUI bylaw and consider possible second iteration which could include: <ul style="list-style-type: none"> Requirements on reusables for takeaway food ware Eco "fees" where additional charges on SUI and/or packaging are redirected into environmental funds Ban on sale of bottled/boxed water below certain volume 								
	Expand existing business license conditions around SUI bylaw to include broader environmental criteria that must be met when opening a business in Banff								
S2. Reusables for Takeaway Services	Work with Biosphere & commercial sector representatives to understand learnings of 2022 feasibility study & determine appropriate next steps & funding source								
	Support reuse pilot programs in Banff by funding infrastructure needs such as a washing facility and/or collections points								
	Expand reuse pilot to larger scale that is visitor friendly with strong interoperability								
S3. Procurement & Packaging	Work with Business Environmental Leadership Working Group (restaurants, hotels, food-service providers) to determine key waste & emissions reduction opportunities in procurement practices; use learnings to support other Banff businesses to adopt sustainable procurement practices.								
	Work with local grocery stores to accelerate uptake of reuse options for food & other products								
	Based on learnings from procurement efforts, explore opportunities to reduce non-recyclable film plastic (packaging) through communication/advocacy to large suppliers								
	Improve ToB systems and/or work with private haulers to expand film plastics recycling efforts, for unavoidable packaging waste								
S4. Water	Fund a non-residential rebate to install water refill stations in places like hotel lobbies, areas frequented by visitors								
	Develop specific messaging focused on Banff tap water to be displayed in refill stations and other visitor-facing areas/platforms								
S5. Municipal Facilities & Events	Establish "single-use free zones" at TOB facilities where reusable cups & containers are available for staff to borrow								
	Update policies to ban single-use items from Town of Banff programs & events								
4. Reducing Consumption									
C1. Library of Things Partnership	Expand long-term funding agreement with Banff Public Library to include one additional FTE for the Library of Things								
	Continue collaborating with library staff to implement workshops & programming focused on "Share, Repair, Reuse" opportunities i.e., swaps, repair cafes								
	Pilot hosting monthly community swaps with a focus on clothing/textiles								
C2. Reuse It Centre	Develop system to track materials (incoming, outgoing) at Banff Reuse It Centre								
	Determine most appropriate enhancements for Reuse It Centre & budget needs								
	Seek centralized, accessible space (possible circular economy "hub") for additional Reuse It Centre								
5. Pedestrian Bin Waste Streams									
PI. Improve User Experience of Pedestrian Waste Streams	Study pedestrian bin waste stream to better understand key barriers, areas of confusion, and possible interventions								
	On 100 & 200 blocks of Banff Avenue, pilot different solutions to determine the most effective ways to improve pedestrian bin waste collection in the public realm, including appropriate streams, shapes, decals, and any other relevant refresh needed; include possible reuse stream								

	Expand pilot to all other public realm areas								
P2. PAYT in Public Realm	Explore possibility of PAYT financial structure for pedestrian bin waste streams								
6. Construction, Renovation & Demolition Materials									
D1. Development & Building Permit Processes	Leverage existing compliance reporting system and follow up on project tracking, final reporting, etc.								
	Add financial accountability to compliance reporting system by building in performance bond								
	Work with Biosphere, Town of Canmore, and other regional partners to determine broader approach to improve sorting & diversion systems.								
	Investigate possibility of financial incentives & disincentives at TOB Waste Transfer Site & Francis Cooke								
D2. Circular Building Practices	Collaborate with Biosphere & BOWDA to develop and promote local case studies/"how-to" resources across building types to promote energy efficiency, on-site waste prevention and diversion, design for disassembly, and responsible material sourcing.								
	Collaborate with Biosphere & BOWDA to develop an industry awards program for CRD waste diversion modelled on the Trailblazers program by recognizing and celebrating local architects and contractors for low-carbon and low-waste features of their residential and commercial projects.								
D3. Material Reuse	Allow permit-based scavenging at the Waste Transfer Site to increase the amount of material reused and recycled, resulting in high indicators for energy saving, pollution prevention, landfill lifetime extension, and community economic benefit- particularly to small-scale artisans.								
	Investigate the possibility of a small-scale Material Reuse Facility, possibly integrated with the Reuse-It Centre, to provide Banff residents, businesses, and small-scale artisans with the opportunity to access a range of high-quality, low-cost building materials selected from materials dropped at the Waste Transfer Site.								
	Require publication in the local newspaper of all building demolition permit applications to solicit salvage of reusable items by deconstruction firms								
D4. Municipal Buildings	Buy composted soil for projects and develop policies to support its use, particularly for new development								
	Work with internal teams (ex. engineering) to incorporate design for deconstruction & recyclability of materials for new TOB facilities.								
	Add update to the Municipal Buildings Policy to elevate circular design practices, etc.								
	Establish an embodied carbon baseline for recent Town of Banff buildings and establish an embodied carbon reduction target from this baseline, like the City of Vancouver's Embodied Carbon Reduction Goal (40% reduction by 2030).								
	Integrate CE Building Principles into the Banff Design Guidelines through highlighting the importance of on-site waste prevention and diversion, design for disassembly, and responsible material sourcing.								
7. Material Management & Emissions									
M1. Material Management & Emissions	Hire a full time Reuse-It & Drop-Off Yard Attendant to help users properly divert recyclable materials and dispose of residuals where needed								
	Prioritize landfill waste disposal to ensure closest possible facility proximity and landfill methane gas capture								
	On an annual basis, report on landfill emissions and transportation emissions associated with waste produced in the Town's jurisdiction.								